



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co.**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206

ATTN: Kitt Noah

### **Dowell #1-33**

### **33-15s-29w Gove,KS**

Start Date: 2012.08.10 @ 17:40:00

End Date: 2012.08.11 @ 01:47:30

Job Ticket #: 48817                      DST #: 1

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.15 @ 16:09:12

Hartman Oil Co.  
33-15s-29w Gove,KS  
Dowell #1-33  
DST # 1  
LKC " K "  
2012.08.10



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

Hartman Oil Co.  
10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**33-15s-29w Gove,KS**

**Dowell #1-33**

Job Ticket: 48817

**DST#: 1**

Test Start: 2012.08.10 @ 17:40:00

## GENERAL INFORMATION:

Formation: **LKC " K "**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 20:03:45  
 Time Test Ended: 01:47:30  
 Interval: **3960.00 ft (KB) To 3995.00 ft (KB) (TVD)**  
 Total Depth: 3995.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Initial)  
 Tester: Will MacLean  
 Unit No: 40  
 Reference Elevations: 2617.00 ft (KB)  
 2607.00 ft (CF)  
 KB to GR/CF: 10.00 ft

**Serial #: 8353**

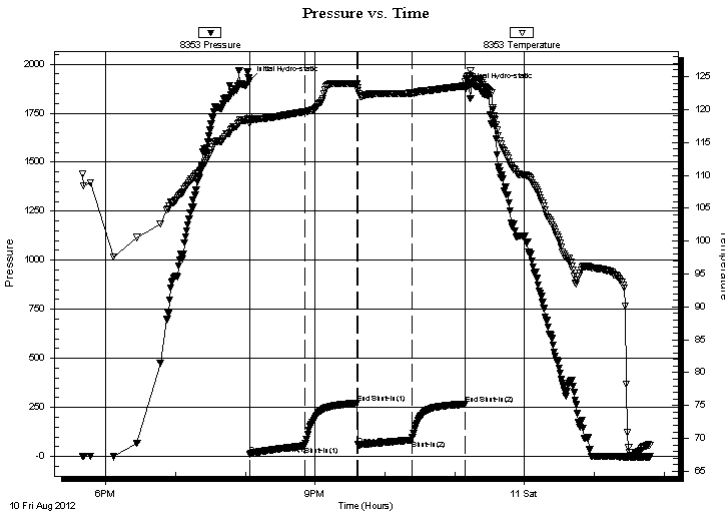
**Outside**

Press @ Run Depth: 83.42 psig @ 3963.00 ft (KB)  
 Start Date: 2012.08.10 End Date: 2012.08.11  
 Start Time: 17:40:00 End Time: 01:47:30

Capacity: 8000.00 psig  
 Last Calib.: 2012.08.11  
 Time On Btm: 2012.08.10 @ 20:03:30  
 Time Off Btm: 2012.08.10 @ 23:09:00

**TEST COMMENT:** IF- Weak Surface Blow Built to 1 1/4"  
 IS- No Blow  
 FF- Very Weak Surface Blow  
 FS- No Blow

## PRESSURE SUMMARY



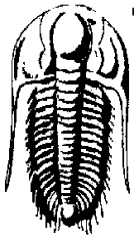
Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1915.46	118.95	Initial Hydro-static
1	12.40	117.82	Open To Flow (1)
48	54.13	119.67	Shut-In(1)
93	270.45	123.88	End Shut-In(1)
94	58.82	122.88	Open To Flow (2)
140	83.42	122.48	Shut-In(2)
185	266.46	123.60	End Shut-In(2)
186	1877.97	124.29	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCW 31%m 69%w with Few Oil Spots	0.30
60.00	MCW 43%m 57%w with Few Oil Spots	0.30
5.00	WCM 14%w 86%m	0.02

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



# TRILOBITE TESTING, INC.

## DRILL STEM TEST REPORT

Hartman Oil Co.  
10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**33-15s-29w Gove,KS**

**Dowell #1-33**

Job Ticket: 48817

**DST#: 1**

Test Start: 2012.08.10 @ 17:40:00

### GENERAL INFORMATION:

Formation: **LKC " K "**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 20:03:45

Time Test Ended: 01:47:30

Test Type: Conventional Bottom Hole (Initial)

Tester: Will MacLean

Unit No: 40

**Interval: 3960.00 ft (KB) To 3995.00 ft (KB) (TVD)**

Total Depth: 3995.00 ft (KB) (TVD)

Hole Diameter: 7.88 inches Hole Condition: Good

Reference Elevations: 2617.00 ft (KB)

2607.00 ft (CF)

KB to GR/CF: 10.00 ft

**Serial #: 8360 Inside**

Press @ Run Depth: psig @ 3963.00 ft (KB)

Start Date: 2012.08.10

End Date: 2012.08.11

Capacity: 8000.00 psig

Last Calib.: 2012.08.11

Start Time: 17:40:05

End Time: 01:47:44

Time On Btm:

Time Off Btm:

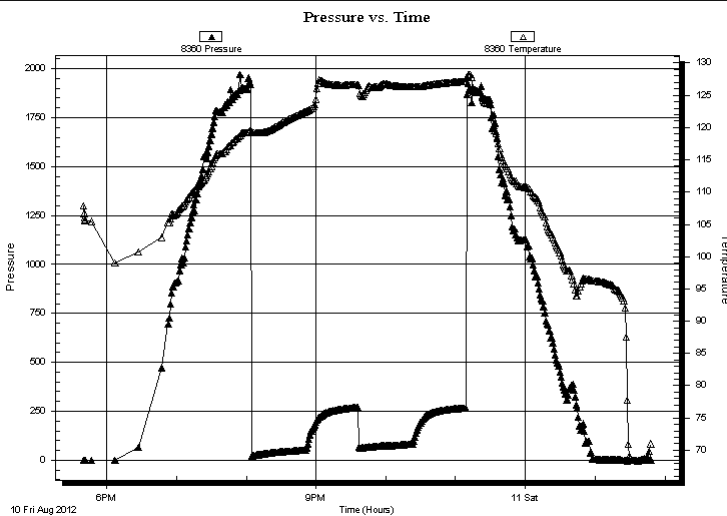
**TEST COMMENT:** IF- Weak Surface Blow Built to 1 1/4"

IS- No Blow

FF- Very Weak Surface Blow

FS- No Blow

### PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

### Recovery

Length (ft)	Description	Volume (bbl)
60.00	MCW 31%m 69%w with Few Oil Spots	0.30
60.00	MCW 43%m 57%w with Few Oil Spots	0.30
5.00	WCM 14%w 86%m	0.02

### Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Co.

**33-15s-29w Gove,KS**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**Dowell #1-33**

Job Ticket: 48817

**DST#: 1**

Test Start: 2012.08.10 @ 17:40:00

## Tool Information

Drill Pipe:	Length: 3717.00 ft	Diameter: 3.80 inches	Volume: 52.14 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 26000.00 lb
Drill Collar:	Length: 239.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 22000.00 lb
			<u>Total Volume: 53.32 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	16.00 ft			String Weight: Initial 62000.00 lb
Depth to Top Packer:	3960.00 ft			Final 62000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	35.00 ft			
Tool Length:	55.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
------------------	-------------	------------	----------	------------	----------------

Change Over Sub	1.00			3941.00	
Shut In Tool	5.00			3946.00	
Hydraulic tool	5.00			3951.00	
Packer	5.00			3956.00	20.00 Bottom Of Top Packer
Packer	4.00			3960.00	
Stubb	1.00			3961.00	
Perforations	2.00			3963.00	
Recorder	0.00	8360	Inside	3963.00	
Recorder	0.00	8353	Outside	3963.00	
Perforations	29.00			3992.00	
Bullnose	3.00			3995.00	35.00 Bottom Packers & Anchor

**Total Tool Length: 55.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Co.

**33-15s-29w Gove,KS**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**Dowell #1-33**

Job Ticket: 48817

**DST#: 1**

Test Start: 2012.08.10 @ 17:40:00

## Mud and Cushion Information

Mud Type: Gel Chem

Cushion Type:

Oil API:

deg API

Mud Weight: 9.00 lb/gal

Cushion Length:

ft

Water Salinity:

29000 ppm

Viscosity: 46.00 sec/qt

Cushion Volume:

bbf

Water Loss: 7.95 in<sup>3</sup>

Gas Cushion Type:

Resistivity: ohm.m

Gas Cushion Pressure:

psig

Salinity: 1500.00 ppm

Filter Cake: 1.00 inches

## Recovery Information

Recovery Table

Length ft	Description	Volume bbf
60.00	MCW 31% <i>m</i> 69% <i>w</i> with Few Oil Spots	0.295
60.00	MCW 43% <i>m</i> 57% <i>w</i> with Few Oil Spots	0.295
5.00	WCM 14% <i>w</i> 86% <i>m</i>	0.025

Total Length: 125.00 ft      Total Volume: 0.615 bbf

Num Fluid Samples: 0

Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

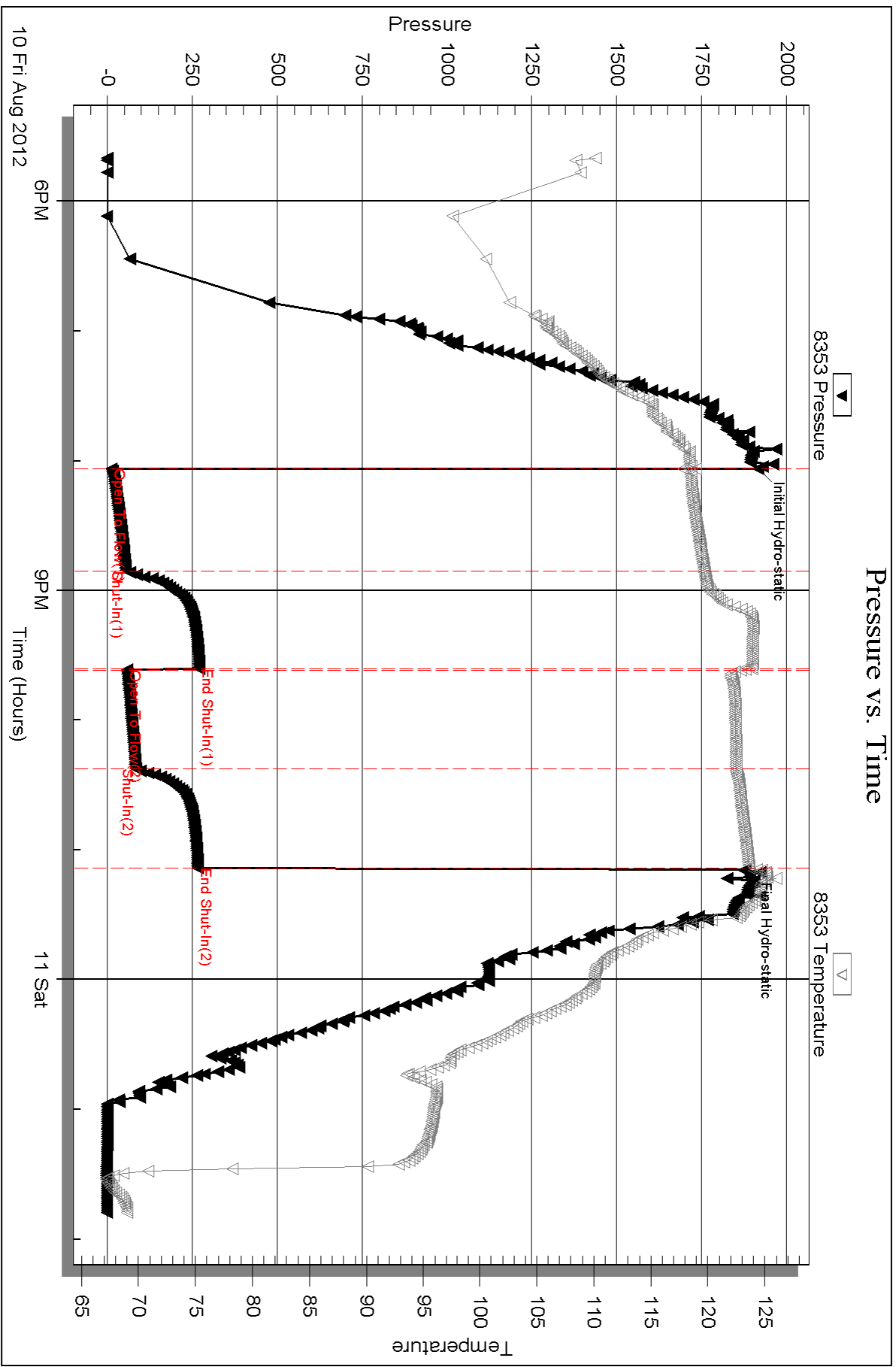
Recovery Comments: RW is .223 @ 68f = 29000

Serial #: 8353

Outside Hartman Oil Co.

Dow ell #1-33

DST Test Number: 1



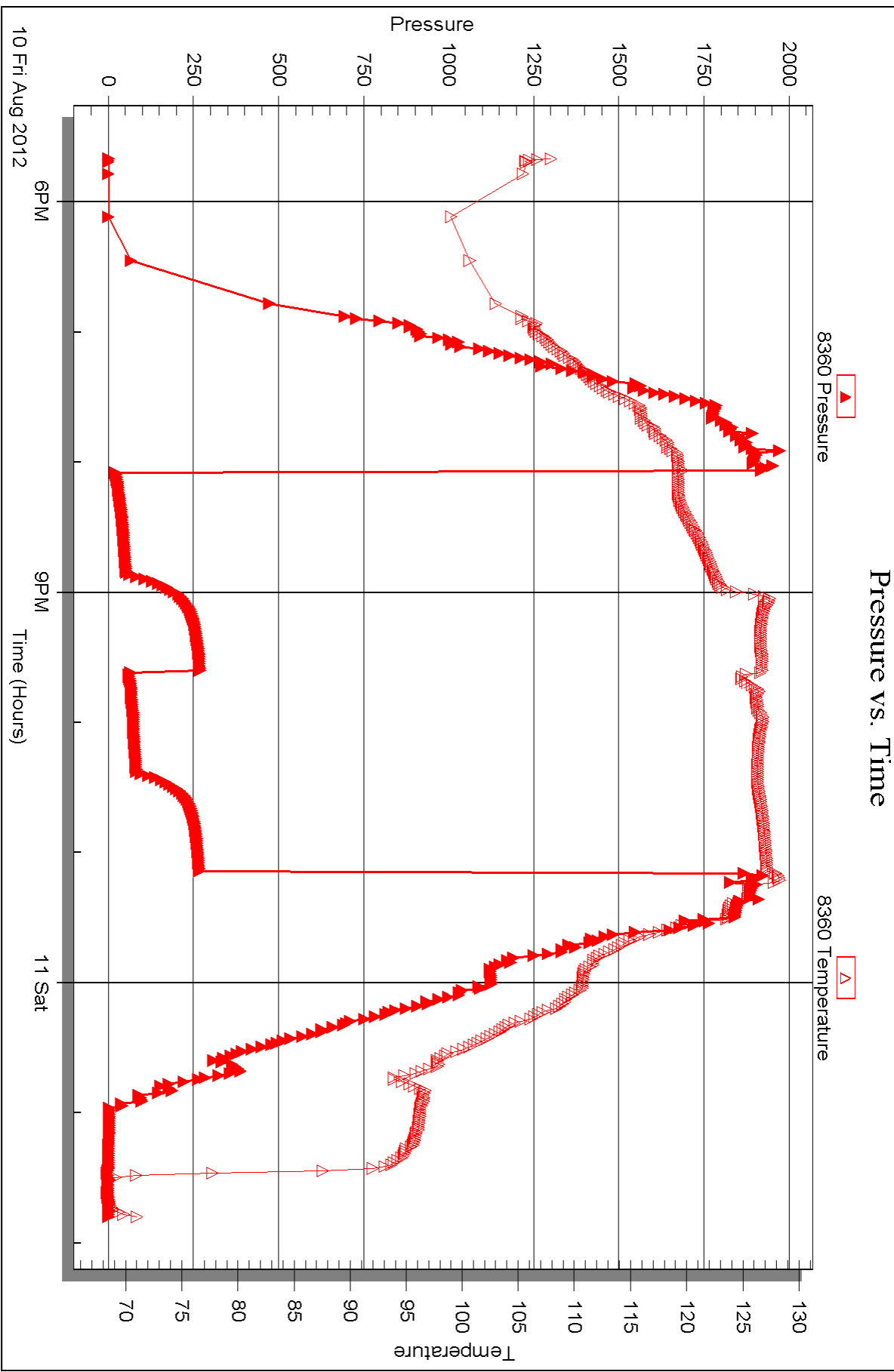
Serial #: 8360

Inside

Hartman Oil Co.

Dow ell #1-33

DST Test Number: 1





## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co.**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206

ATTN: Kitt Noah

### **Dowell #1-33**

### **33-15s-29w Gove,KS**

Start Date: 2012.08.11 @ 10:22:00

End Date: 2012.08.11 @ 18:07:54

Job Ticket #: 48818                      DST #: 2

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.15 @ 16:08:09

Hartman Oil Co. 33-15s-29w Gove,KS Dowell #1-33 DST # 2 LKC "Middle Creek" 2012.08.11





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Hartman Oil Co.  
 10500 E Berkeley Sq  
 PKWY STE 100  
 Wichita KS 67206  
 ATTN: Kitt Noah

**33-15s-29w Gove, KS**

**Dowell #1-33**

Job Ticket: 48818

**DST#: 2**

Test Start: 2012.08.11 @ 10:22:00

## GENERAL INFORMATION:

Formation: **LKC "Middle Creek"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:24:10

Time Test Ended: 18:07:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 40

**Interval: 3993.00 ft (KB) To 4012.00 ft (KB) (TVD)**

Reference Elevations: 2617.00 ft (KB)

Total Depth: 4012.00 ft (KB) (TVD)

2607.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8360**

**Inside**

Press @ Run Depth: 82.04 psig @ 3994.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.11

End Date:

2012.08.11

Last Calib.:

2012.08.11

Start Time: 10:22:00

End Time:

18:07:54

Time On Btm:

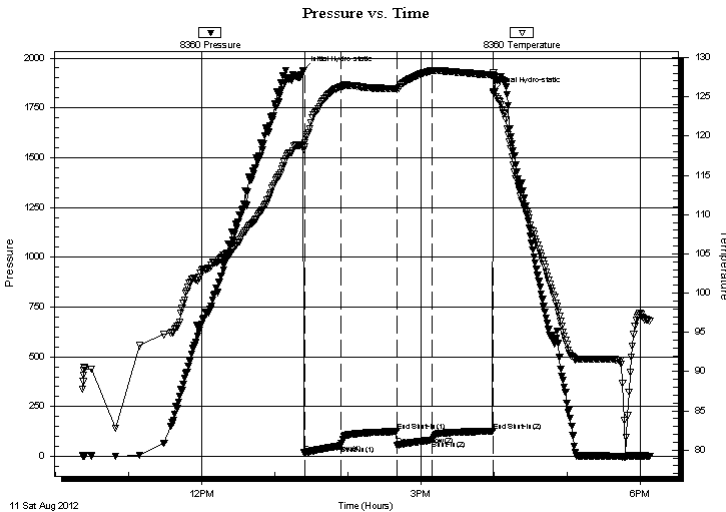
2012.08.11 @ 13:23:10

Time Off Btm:

2012.08.11 @ 15:59:24

**TEST COMMENT:** IF- Surface Blow Built to BOB in 5 1/2 min  
 IS- No Blow  
 FF- Weak Surface Blow Built to 5"  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	1935.48	118.82	Initial Hydro-static
1	14.99	118.61	Open To Flow (1)
31	53.47	126.33	Shut-In(1)
77	124.72	126.04	End Shut-In(1)
78	54.97	125.98	Open To Flow (2)
106	82.04	128.32	Shut-In(2)
156	125.83	127.77	End Shut-In(2)
157	1831.99	128.04	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
60.00	GMCW 3%g 18%m 79%w with Skim oil	0.30
60.00	OGWCM 2%oil 6%g 20%w 72%m	0.30
10.00	OGCM 1%oil 2%g 97%m	0.05
0.00	305' of GIP	0.00

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE TESTING, INC.**

**DRILL STEM TEST REPORT**

Hartman Oil Co.  
10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**33-15s-29w Gove,KS**

**Dowell #1-33**

Job Ticket: 48818

**DST#: 2**

Test Start: 2012.08.11 @ 10:22:00

**GENERAL INFORMATION:**

Formation: **LKC "Middle Creek"**

Deviated: No Whipstock: ft (KB)

Time Tool Opened: 13:24:10

Time Test Ended: 18:07:54

Test Type: Conventional Bottom Hole (Reset)

Tester: Will MacLean

Unit No: 40

**Interval: 3993.00 ft (KB) To 4012.00 ft (KB) (TVD)**

Reference Elevations: 2617.00 ft (KB)

Total Depth: 4012.00 ft (KB) (TVD)

2607.00 ft (CF)

Hole Diameter: 7.88 inches Hole Condition: Good

KB to GR/CF: 10.00 ft

**Serial #: 8353 Outside**

Press @ RunDepth: psig @ 3994.00 ft (KB)

Capacity: 8000.00 psig

Start Date: 2012.08.11 End Date: 2012.08.11

Last Calib.: 2012.08.11

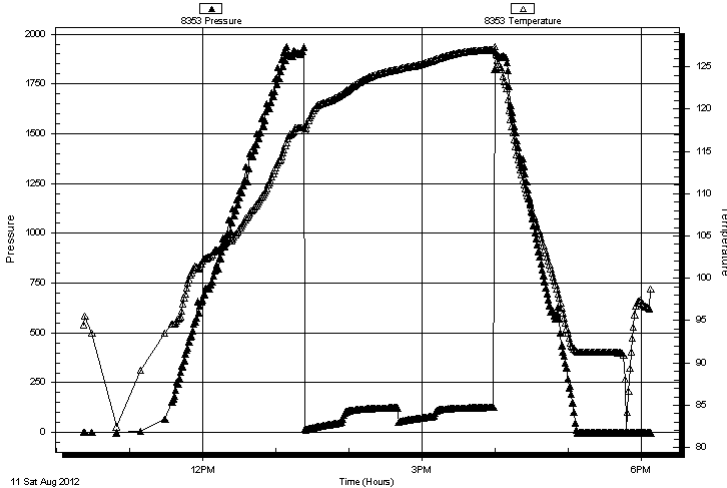
Start Time: 10:22:15 End Time: 18:08:00

Time On Btm:

Time Off Btm:

**TEST COMMENT:** IF- Surface Blow Built to BOB in 5 1/2 min  
IS- No Blow  
FF- Weak Surface Blow Built to 5"  
FS- No Blow

**Pressure vs. Time**



**PRESSURE SUMMARY**

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

**Recovery**

Length (ft)	Description	Volume (bbl)
60.00	GMCW 3%g 18%m 79%w with Skim oil	0.30
60.00	OGWCM 2%oil 6%g 20%w 72%m	0.30
10.00	OGCM 1%oil 2%g 97%m	0.05
0.00	305' of GIP	0.00

**Gas Rates**

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)

\* Recovery from multiple tests



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Co.

**33-15s-29w Gove,KS**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**Dowell #1-33**

Job Ticket: 48818

**DST#: 2**

Test Start: 2012.08.11 @ 10:22:00

## Tool Information

Drill Pipe:	Length: 3746.00 ft	Diameter: 3.80 inches	Volume: 52.55 bbl	Tool Weight: 1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer: 28000.00 lb
Drill Collar:	Length: 239.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose: 10000.00 lb
			<u>Total Volume: 53.73 bbl</u>	Tool Chased ft
Drill Pipe Above KB:	12.00 ft			String Weight: Initial 64000.00 lb
Depth to Top Packer:	3993.00 ft			Final 64000.00 lb
Depth to Bottom Packer:	ft			
Interval between Packers:	19.00 ft			
Tool Length:	39.00 ft			
Number of Packers:	2	Diameter: 6.75 inches		

Tool Comments:

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			3974.00	
Shut In Tool	5.00			3979.00	
Hydraulic tool	5.00			3984.00	
Packer	5.00			3989.00	20.00 Bottom Of Top Packer
Packer	4.00			3993.00	
Stubb	1.00			3994.00	
Recorder	0.00	8360	Inside	3994.00	
Recorder	0.00	8353	Outside	3994.00	
Perforations	15.00			4009.00	
Bullnose	3.00			4012.00	19.00 Bottom Packers & Anchor
<b>Total Tool Length:</b>	<b>39.00</b>				



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Co.

**33-15s-29w Gove,KS**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**Dowell #1-33**

Job Ticket: 48818

**DST#: 2**

Test Start: 2012.08.11 @ 10:22:00

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 6.78 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 2300.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API: deg API

Water Salinity: 31000 ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
60.00	GMCW 3%g 18%m 79%w with Skim of Oil	0.295
60.00	OGWCM 2%oil 6%g 20%w 72%m	0.295
10.00	OGCM 1%oil 2%g 97%m	0.049
0.00	305' of GIP	0.000

Total Length: 130.00 ft Total Volume: 0.639 bbl

Num Fluid Samples: 0

Num Gas Bombs: 0

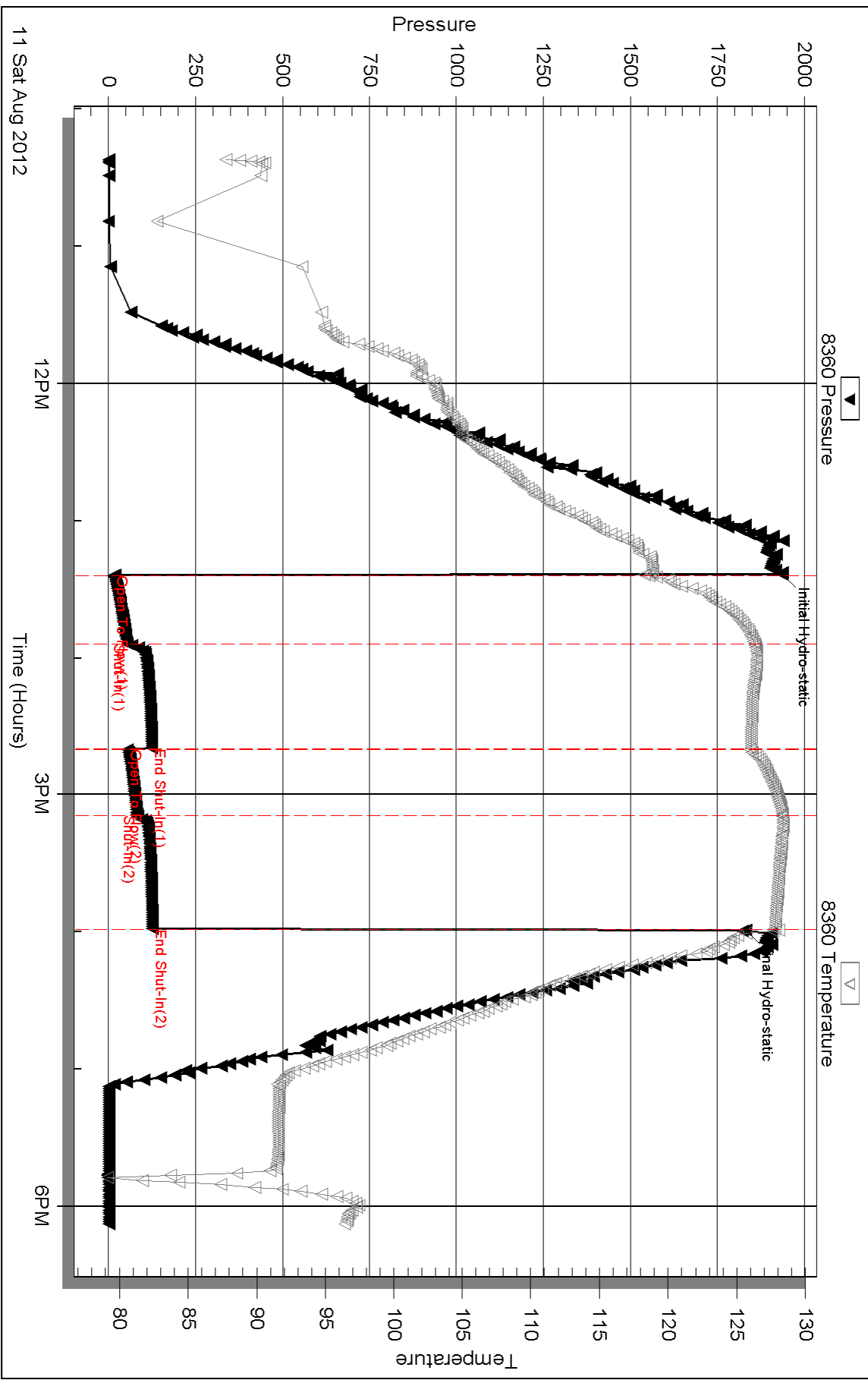
Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments: RW is .153 @ 97f = 31000

### Pressure vs. Time

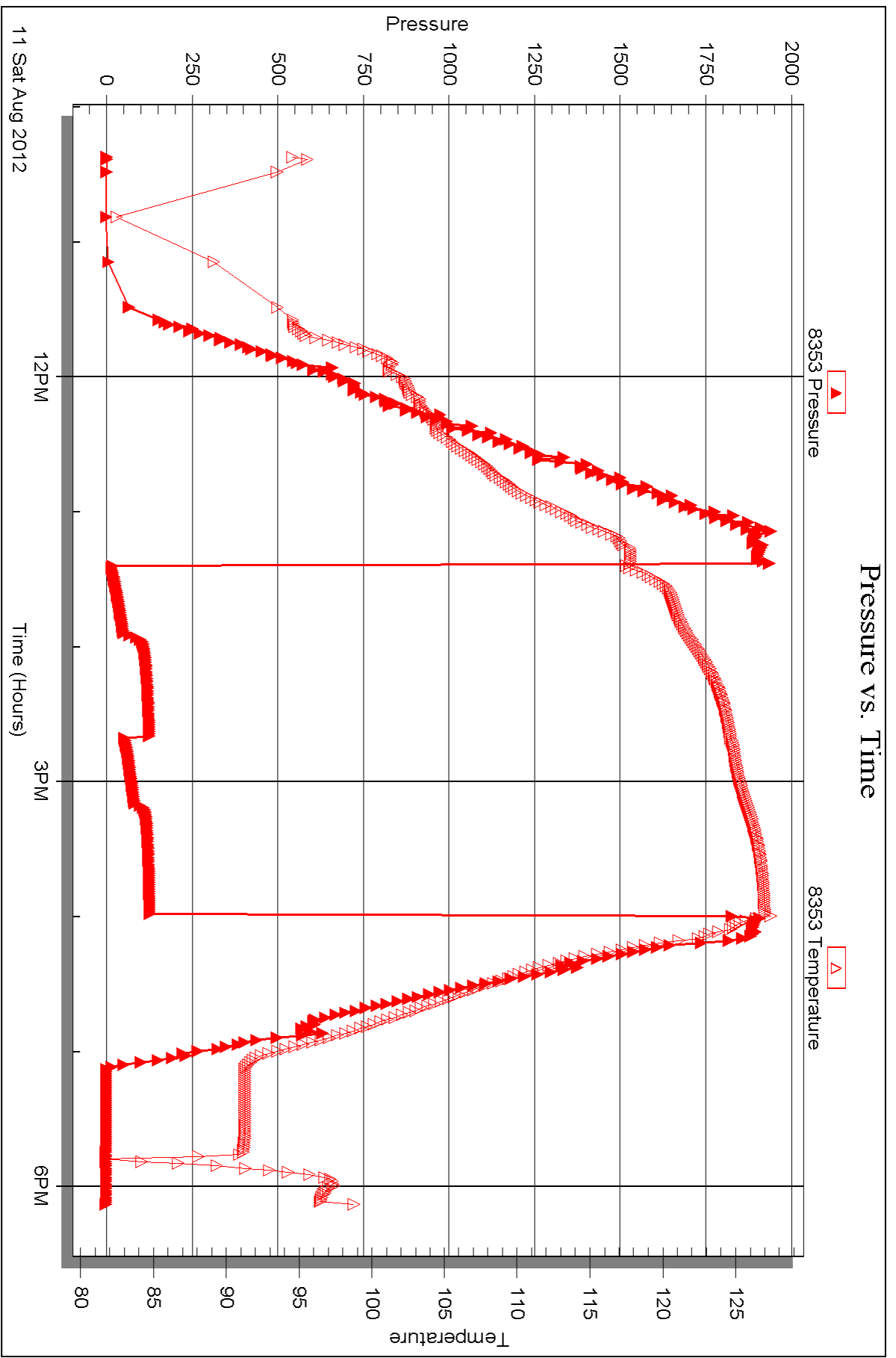


Serial #: 8353

Outside Hartman Oil Co.

Dow ell #1-33

DST Test Number: 2



Triobite Testing, Inc

Ref. No: 48818

Printed: 2012.08.15 @ 16:08:13



## DRILL STEM TEST REPORT

Prepared For: **Hartman Oil Co.**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206

ATTN: Kitt Noah

### **Dowell #1-33**

### **33-15s-29w Gove,KS**

Start Date: 2012.08.12 @ 22:58:00

End Date: 2012.08.13 @ 05:59:09

Job Ticket #: 48819                      DST #: 3

Trilobite Testing, Inc  
PO Box 362 Hays, KS 67601  
ph: 785-625-4778 fax: 785-625-5620

Printed: 2012.08.15 @ 16:07:23

Hartman Oil Co.  
33-15s-29w Gove,KS  
Dowell #1-33  
DST # 3  
Johnson  
2012.08.12



**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Hartman Oil Co.  
 10500 E Berkeley Sq  
 PKWY STE 100  
 Wichita KS 67206  
 ATTN: Kitt Noah

**33-15s-29w Gove,KS**

**Dowell #1-33**

Job Ticket: 48819

**DST#: 3**

Test Start: 2012.08.12 @ 22:58:00

## GENERAL INFORMATION:

Formation: **Johnson**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:14:10  
 Time Test Ended: 05:59:09  
 Interval: **4236.00 ft (KB) To 4305.00 ft (KB) (TVD)**  
 Total Depth: 4305.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Will MacLean  
 Unit No: 40  
 Reference Elevations: 2617.00 ft (KB)  
 2607.00 ft (CF)  
 KB to GR/CF: 10.00 ft

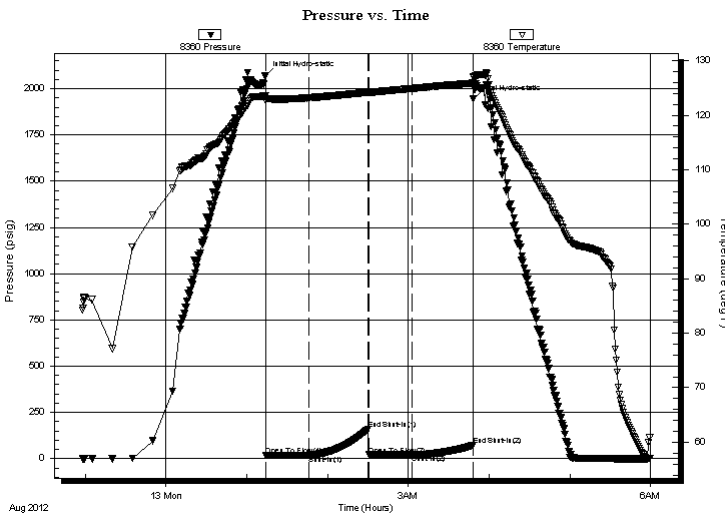
## Serial #: 8360

Inside

Press @ Run Depth: 21.28 psig @ 4240.00 ft (KB) Capacity: 8000.00 psig  
 Start Date: 2012.08.12 End Date: 2012.08.13 Last Calib.: 2012.08.13  
 Start Time: 22:58:00 End Time: 05:59:09 Time On Btm: 2012.08.13 @ 01:13:55  
 Time Off Btm: 2012.08.13 @ 03:47:54

TEST COMMENT: IF- Weak Surface Blow  
 IS- No Blow  
 FF- Weak Surface Blow Died in 4 min  
 FS- No Blow

## PRESSURE SUMMARY



Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation
0	2072.26	123.55	Initial Hydro-static
1	18.54	122.66	Open To Flow (1)
33	19.59	123.20	Shut-In(1)
77	160.24	124.21	End Shut-In(1)
77	20.39	124.15	Open To Flow (2)
109	21.28	124.89	Shut-In(2)
154	71.37	125.88	End Shut-In(2)
154	1943.01	126.99	Final Hydro-static

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 3%oil 97%m	0.05

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)





**TRILOBITE TESTING, INC.**

# DRILL STEM TEST REPORT

Hartman Oil Co.  
 10500 E Berkeley Sq  
 PKWY STE 100  
 Wichita KS 67206  
 ATTN: Kitt Noah

**33-15s-29w Gove,KS**

**Dowell #1-33**

Job Ticket: 48819

**DST#: 3**

Test Start: 2012.08.12 @ 22:58:00

## GENERAL INFORMATION:

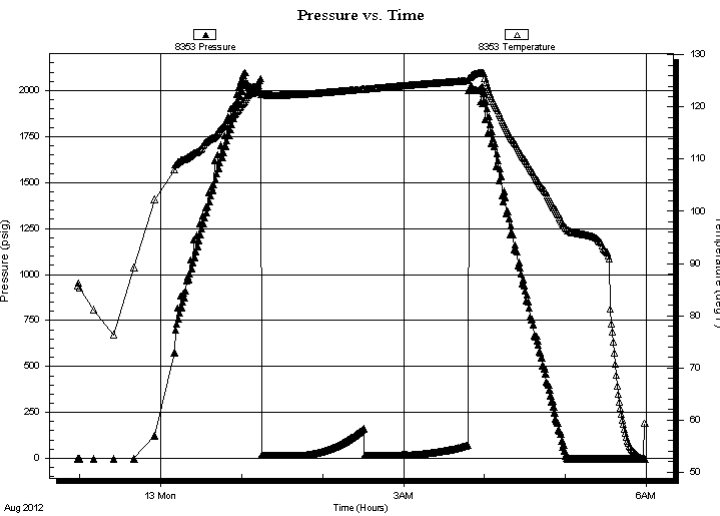
Formation: **Johnson**  
 Deviated: No Whipstock: ft (KB)  
 Time Tool Opened: 01:14:10  
 Time Test Ended: 05:59:09  
 Interval: **4236.00 ft (KB) To 4305.00 ft (KB) (TVD)**  
 Total Depth: 4305.00 ft (KB) (TVD)  
 Hole Diameter: 7.88 inches Hole Condition: Good  
 Test Type: Conventional Bottom Hole (Reset)  
 Tester: Will MacLean  
 Unit No: 40  
 Reference Elevations: 2617.00 ft (KB)  
 2607.00 ft (CF)  
 KB to GR/CF: 10.00 ft

## Serial #: 8353

**Outside**

Press @ Run Depth: psig @ 4240.00 ft (KB)  
 Start Date: 2012.08.12 End Date: 2012.08.13  
 Start Time: 22:58:15 End Time: 05:59:15  
 Capacity: 8000.00 psig  
 Last Calib.: 2012.08.13  
 Time On Btm:  
 Time Off Btm:

TEST COMMENT: IF- Weak Surface Blow  
 IS- No Blow  
 FF- Weak Surface Blow Died in 4 min  
 FS- No Blow



## PRESSURE SUMMARY

Time (Min.)	Pressure (psig)	Temp (deg F)	Annotation

## Recovery

Length (ft)	Description	Volume (bbl)
10.00	OCM 3%oil 97%m	0.05

\* Recovery from multiple tests

## Gas Rates

Choke (inches)	Pressure (psig)	Gas Rate (Mcf/d)



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**TOOL DIAGRAM**

Hartman Oil Co.

**33-15s-29w Gove,KS**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**Dowell #1-33**

Job Ticket: 48819

**DST#: 3**

Test Start: 2012.08.12 @ 22:58:00

## Tool Information

Drill Pipe:	Length: 3997.00 ft	Diameter: 3.80 inches	Volume: 56.07 bbl	Tool Weight:	1500.00 lb
Heavy Wt. Pipe:	Length: 0.00 ft	Diameter: 0.00 inches	Volume: 0.00 bbl	Weight set on Packer:	24000.00 lb
Drill Collar:	Length: 239.00 ft	Diameter: 2.25 inches	Volume: 1.18 bbl	Weight to Pull Loose:	14000.00 lb
			<u>Total Volume: 57.25 bbl</u>	Tool Chased	ft
Drill Pipe Above KB:	20.00 ft			String Weight: Initial	66000.00 lb
Depth to Top Packer:	4236.00 ft			Final	66000.00 lb
Depth to Bottom Packer:	ft				
Interval between Packers:	69.00 ft				
Tool Length:	89.00 ft				
Number of Packers:	2	Diameter:	6.75 inches		
Tool Comments:					

Tool Description	Length (ft)	Serial No.	Position	Depth (ft)	Accum. Lengths
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Change Over Sub	1.00			4217.00	
Shut In Tool	5.00			4222.00	
Hydraulic tool	5.00			4227.00	
Packer	5.00			4232.00	20.00 Bottom Of Top Packer
Packer	4.00			4236.00	
Stubb	1.00			4237.00	
Perforations	3.00			4240.00	
Recorder	0.00	8360	Inside	4240.00	
Recorder	0.00	8353	Outside	4240.00	
Perforations	25.00			4265.00	
Change Over Sub	1.00			4266.00	
Drill Pipe	31.00			4297.00	
Change Over Sub	1.00			4298.00	
Perforations	4.00			4302.00	
Bullnose	3.00			4305.00	69.00 Bottom Packers & Anchor

**Total Tool Length: 89.00**



**TRILOBITE  
TESTING, INC.**

# DRILL STEM TEST REPORT

**FLUID SUMMARY**

Hartman Oil Co.

**33-15s-29w Gove,KS**

10500 E Berkeley Sq  
PKWY STE 100  
Wichita KS 67206  
ATTN: Kitt Noah

**Dowell #1-33**

Job Ticket: 48819

**DST#: 3**

Test Start: 2012.08.12 @ 22:58:00

## Mud and Cushion Information

Mud Type: Gel Chem

Mud Weight: 9.00 lb/gal

Viscosity: 51.00 sec/qt

Water Loss: 7.98 in<sup>3</sup>

Resistivity: ohm.m

Salinity: 2400.00 ppm

Filter Cake: 1.00 inches

Cushion Type:

Cushion Length: ft

Cushion Volume: bbl

Gas Cushion Type:

Gas Cushion Pressure: psig

Oil API:

Water Salinity: deg API

ppm

## Recovery Information

Recovery Table

Length ft	Description	Volume bbl
10.00	OCM 3%oil 97%m	0.049

Total Length: 10.00 ft      Total Volume: 0.049 bbl

Num Fluid Samples: 0

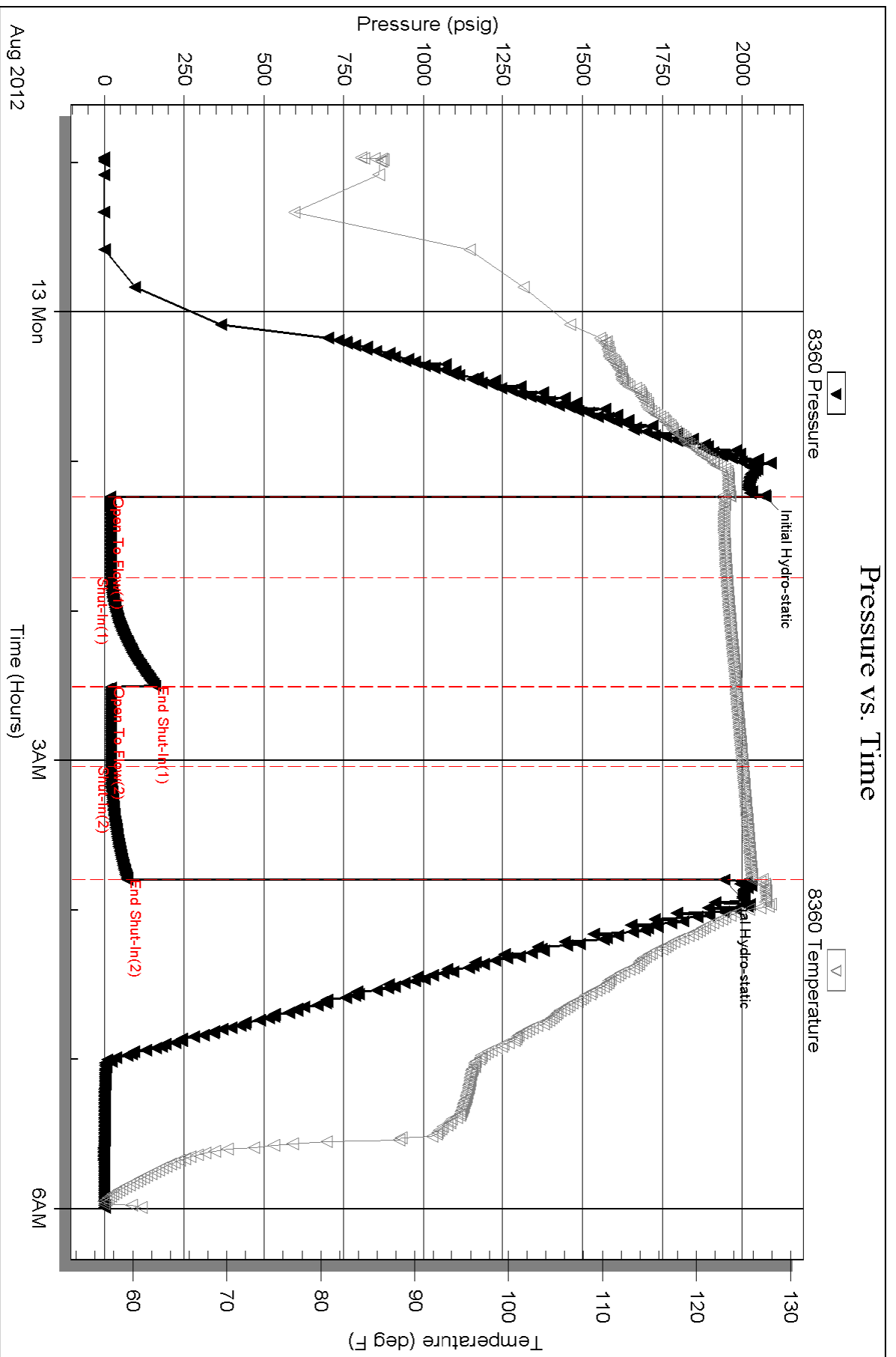
Num Gas Bombs: 0

Serial #:

Laboratory Name:

Laboratory Location:

Recovery Comments:

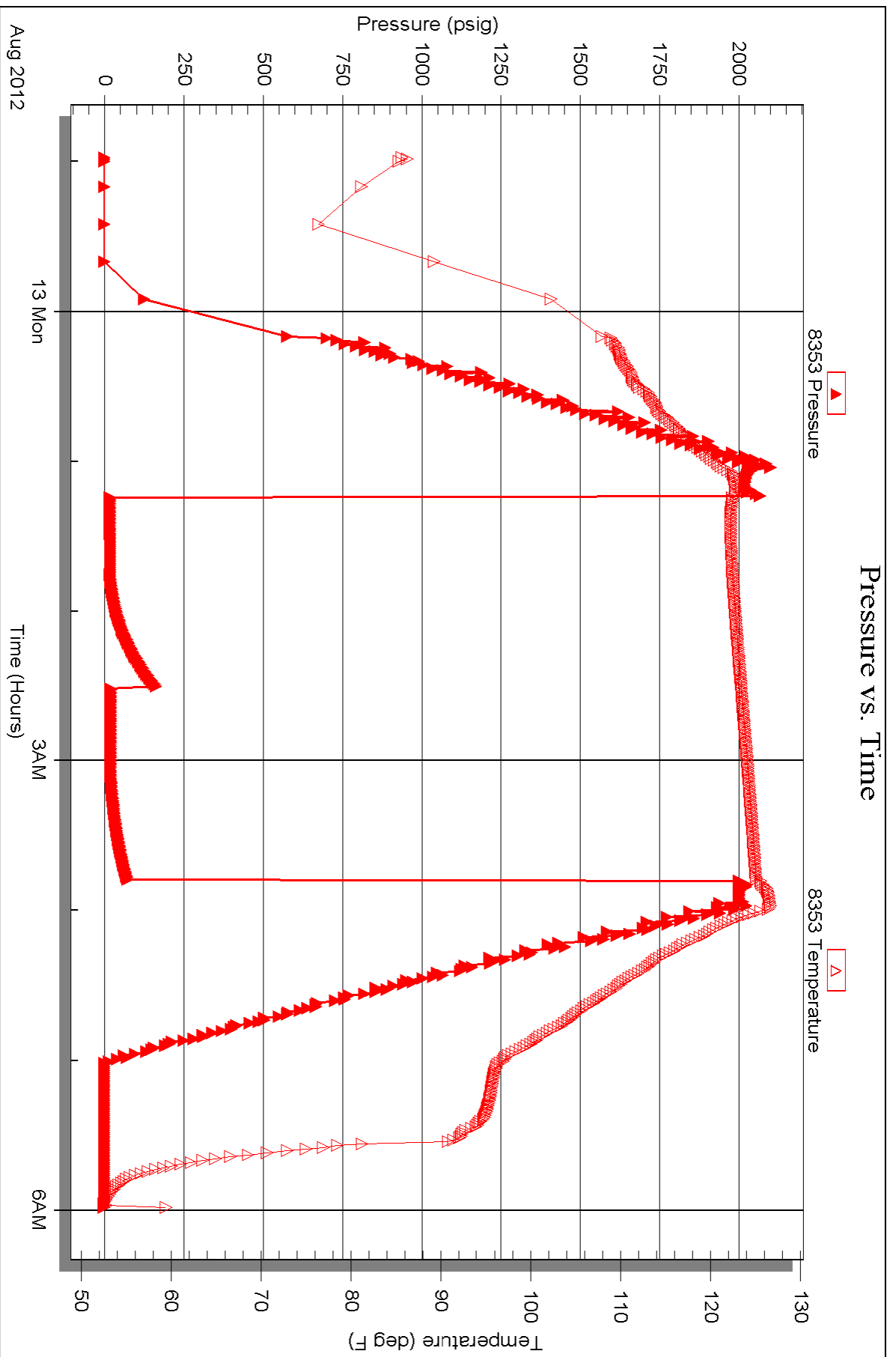


Serial #: 8353

Outside Hartman Oil Co.

Dow ell #1-33

DST Test Number: 3





# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48817

Well Name & No. Dowell #1-33 Test No. DST #1 Date 8-10-12  
 Company Hartman Oil Co. Elevation 2617 KB 2607 GL  
 Address 10500 E Berkeley Sq PKWY STE 100 Wichita KS 67206  
 Co. Rep / Geo. Kitt Noah Rig H-2 Rig #2  
 Location: Sec. 33 Twp. 15S Rge. 29W Co. Gove State KS

Interval Tested 3960-3995 Zone Tested LKC "K"  
 Anchor Length 35 Drill Pipe Run 3717 Mud Wt. 9.3  
 Top Packer Depth 3956 Drill Collars Run 239 Vis 46  
 Bottom Packer Depth 3960 Wt. Pipe Run 0 WL 8.0  
 Total Depth 3995 Chlorides 1500 ppm System LCM 21b  
 Blow Description IF - Weak Surface Blow Bu-It to 1 1/4"  
ISI - No Blow  
FF - Very Weak Surface Blow  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>5</u>	<u>WCM</u>			<u>14%</u>	<u>86%</u>
<u>60</u>	<u>MCW with Few Oil spots</u>			<u>57%</u>	<u>43%</u>
<u>60</u>	<u>MCW with Few Oil spots</u>			<u>69%</u>	<u>31%</u>
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 125 BHT 123 Gravity \_\_\_\_\_ API RW 223 @ 68 ° F Chlorides 29000 ppm

(A) Initial Hydrostatic 1915  Test 1150 T-On Location 14:40  
 (B) First Initial Flow 12  Jars \_\_\_\_\_ T-Started 17:40  
 (C) First Final Flow 54  Safety Joint \_\_\_\_\_ T-Open 20:03  
 (D) Initial Shut-In 270  Circ Sub N/C T-Pulled 23:09  
 (E) Second Initial Flow 58  Hourly Standby \_\_\_\_\_ T-Out 1:47  
 (F) Second Final Flow 83  Mileage 80 R/T 124 Comments \_\_\_\_\_  
 (G) Final Shut-In 266  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1877  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby \_\_\_\_\_  
 Accessibility 150  
 Sub Total 1424

Initial Open 45  
 Initial Shut-In 45  
 Final Flow 45  
 Final Shut-In 45

Ruined Shale Packer \_\_\_\_\_  
 Ruined Packer \_\_\_\_\_  
 Extra Copies \_\_\_\_\_  
 Sub Total 0  
 Total 1424  
 MP/DST Disc't \_\_\_\_\_

Approved By Kitt Noah Our Representative Kitt Noah

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# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48818

Well Name & No. Dowell #1-33 Test No. DST #2 Date 8-11-12  
 Company Hartman Oil Co. Elevation 2617 KB 2607 GL  
 Address 10500 E Berkeley Sq PRWY STE 100 Wichita KS 67206  
 Co. Rep / Geo. Kitt Noah Rig H-2 Rig #2  
 Location: Sec. 33 Twp. 15s Rge. 29w Co. Grove State KS

Interval Tested 3993 - 4012 Zone Tested LKC "Middle Creek"  
 Anchor Length 19 Drill Pipe Run 3746 Mud Wt. 9.2  
 Top Packer Depth 3989 Drill Collars Run 239 Vis 51  
 Bottom Packer Depth 3993 Wt. Pipe Run 0 WL 6.8  
 Total Depth 4012 Chlorides 2300 ppm System LCM 21b

Blow Description IF- Surface Blow Built to BOB in 5 1/2 min  
ISI- No Blow  
EF- Weak Surface Blow Built to 5"  
FST- No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>OG-CM</u>	<u>2</u>	<u>1</u>	<u>97</u>	<u>97</u>
<u>60</u>	<u>OG-WCM</u>	<u>6</u>	<u>2</u>	<u>20</u>	<u>72</u>
<u>60</u>	<u>G-MCW with skin of 0.13</u>	<u>13</u>	<u>79</u>	<u>18</u>	<u>18</u>
<u>305'</u>	<u>of G-IP</u>				

Rec Total 130 BHT 126 Gravity API RW-153 @ 97 °F Chlorides 31000 ppm

(A) Initial Hydrostatic 1935  Test 1250 T-On Location 9:10  
 (B) First Initial Flow 14  Jars \_\_\_\_\_ T-Started 10:22  
 (C) First Final Flow 53  Safety Joint \_\_\_\_\_ T-Open 13:24  
 (D) Initial Shut-In 124  Circ Sub NIC T-Pulled 15:59  
 (E) Second Initial Flow 54  Hourly Standby \_\_\_\_\_ T-Out 18:07  
 (F) Second Final Flow 82  Mileage 80 R/T 124 Comments \_\_\_\_\_  
 (G) Final Shut-In 125  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1831  Straddle \_\_\_\_\_  Ruined Shale Packer \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  Ruined Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  Extra Copies \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_ Sub Total 0  
 Day Standby \_\_\_\_\_ Total 1524  
 Accessibility 150 MP/DST Disc't \_\_\_\_\_  
 Sub Total 1524

Approved By [Signature] Our Representative [Signature]

Trilobite Testing Inc. shall not be liable for damaged of any kind of the property or personnel of the one for whom a test is made, or for any loss suffered or sustained, directly or indirectly, through the use of its equipment, or its statements of opinion concerning the results of any test, tools lost or damaged in the hole shall be paid for at cost by the party for whom the test is made.



# TRILOBITE TESTING INC.

P.O. Box 1733 • Hays, Kansas 67601

## Test Ticket

NO. 48819

Well Name & No. Dowell #1-33 Test No. DST #3 Date 8-12-12  
 Company Hartman Oil Co. Elevation 2617 KB 2607 GL  
 Address 10500 E Berkeley Sq PKWY STE 100 Wichita KS 67206  
 Co. Rep / Geo. Kitt Noah Rig H-2 Rig #2  
 Location: Sec. 33 Twp. 15S Rge. 29W Co. Gove State KS

Interval Tested 4236-4305 Zone Tested Johnson  
 Anchor Length 69 Drill Pipe Run 3997 Mud Wt. 9.2  
 Top Packer Depth 4232 Drill Collars Run 239 Vis 51  
 Bottom Packer Depth 4236 Wt. Pipe Run 0 WL 8.0  
 Total Depth 4305 Chlorides 2400 ppm System LCM 116

Blow Description IF - Weak Surface Blow  
ISI - No Blow  
FF - Weak Surface Blow Dried in 4 min  
FSI - No Blow

Rec	Feet of	%gas	%oil	%water	%mud
<u>10</u>	<u>CCM</u>		<u>3%</u>	<u>97%</u>	
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud
Rec	Feet of	%gas	%oil	%water	%mud

Rec Total 10 BHT 123 Gravity \_\_\_\_\_ API RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm  
 (A) Initial Hydrostatic 2072  Test 1250 T-On Location 21:24  
 (B) First Initial Flow 2072 18  Jars \_\_\_\_\_ T-Started 22:58  
 (C) First Final Flow 18 19  Safety Joint \_\_\_\_\_ T-Open 1:14  
 (D) Initial Shut-In 19 160  Circ Sub NIC T-Pulled 3:47  
 (E) Second Initial Flow 160 20  Hourly Standby \_\_\_\_\_ T-Out 5:59  
 (F) Second Final Flow 20 21  Mileage \_\_\_\_\_ 124 Comments \_\_\_\_\_  
 (G) Final Shut-In 2 71  Sampler \_\_\_\_\_  
 (H) Final Hydrostatic 1943  Straddle \_\_\_\_\_  
 Shale Packer \_\_\_\_\_  
 Extra Packer \_\_\_\_\_  
 Extra Recorder \_\_\_\_\_  
 Day Standby 2 1/2 Hr  
 Accessibility 150

Initial Open 30  
 Initial Shut-In 45  
 Final Flow 30  
 Final Shut-In 45  
 Sub Total 83.33  
 Total 1607.33  
 MP/DST Disc't \_\_\_\_\_

Approved By Kitt Noah Our Representative Kitt Noah  
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